Strata Bond S

Product Code Prefix
PUR 2C

Product – Two-Component – Polyurethane Resin

Strata Bond S is a slow-reacting, high-strength two-component polyurethane resin. It is suitable for soil stabilization, consolidation in rock formations and for gas and water sealing. Strata Bond S System is a 100% solid, i.e., solvent- and phthalate-free. The resin is environmentally friendly and has no adverse or toxicological effects on microorganisms.

Advantages

- Slow-reacting resin
- The system is 100% solid (solvent- and phthalate-free)
- Well balanced and adjusted viscosities of the individual components
- Low initial viscosity
- Easy mixing even in different temperature ranges
- Excellent mechanical properties
- Good adhesion to substrates even under wet and dry conditions
- Low environmental impact

Components

	Unit	Strata Bond S Comp. A	Strata Bond S Comp. B
Colour	------	Colourless liquid	Dark brown liquid
Density at 20 [°C]	[g/cm^3]	1.02±0.04	1.23±0.04
Viscosity at 25 [°C]	[mPa*s]	300±50	220±50
Viscosity at 10 [°C]	[mPa*s]	730±50	850±50

Material Properties

	Unit	25 [°C]	10 [°C]
Foam factor	------	1.0 - 1.1	1.0 - 1.1
Viscosity after mixing (A+B)	[mPa*s]	280	800
Start Time	[min.]	3 - 5	9 - 11
End of reaction	[min.]	20 - 50	120 – 180
reaction temperature	[°C]	< 140	< 130
Compressive strength*	[MPa]	> 60	> 60
Bending strength*	[MPa]	> 60	> 60

* Foam factor 1,0

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Environmental Impact

Test	Procedure	Results (excerpt from admission)
Influence of resin on the	DIN 19631 DIBt Berlin	No adverse or toxicological effects on degrading microorganisms. Easily biodegradable. Aromatic amines - all values below the respective detection limits
groundwater	KTW-Guideline	Values below the prescribed limit values of the KTW guideline. Aromatic amines - all values below the respective detection limits

Application

The Strata Bond S A component and Strata Bond S B component are pumped with two-component pumps commonly used in mining and tunneling with a volume ratio of 1:1. It is recommended to use a static mixer type M-10x360 (part no. M-10x360) or equivalent.The components of Strata Bond S system must be protected against moisture, moist skin formation and other pump-damaging particles as well as other precipitations must not enter the pumps.

Mixing ratio of the components:

	Strata Bond S comp. A	Strata Bond S comp. B
volumetric [v/v]	100	100
gravimetric [m/m]	100	120

If components A and B are mixed together in a different ratio, the reaction time and mechanical properties may differ significantly from the above.

Cleaning of the Injection Pump and Accessories

The cleaning of the application equipment must be carried out thoroughly with great attention. Pumping system, valves, mixing equipment and hoses must be cleaned immediately after the injection process has been completed. Thoroughly rinse the components that have not yet been reacted with a gasket-friendly cleaner, change the cleaning liquid several times during each cleaning process and collect it for disposal. Reacted resin can only be etched and mechanically removed. To be sure, read the technical description of the injection pump and the data sheet of the cleaner used, carefully. Please refer to the pump manufacturer's operating manual for detailed instructions.

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DSI UNDERGROUND
A SANDVIK COMPANY

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Packaging

Packaging	Component	Weight [kg]	Article-No.:
Plastic canister 25 [l]	A	25	SB-S-A-25P
	B	30	SB-S-B-25P
Metal container 20 [l]	A	20	SB-S-A-20M
	B	24	SB-S-B-20M
Steel sheet piling drum 200 [l]	A	200	SB-S-A-200M
	B	240	SB-S-B-200M
IBC container 1000 [l]	A	1,000	SB-S-A-1000
	B	1,200	SB-S-B-1000

Other packaging possible on the request

Storage and Transport Conditions

Both resin components are delivered in canisters - made of plastic or sheet metal - (other packaging is possible on request). The recommended storage in dry and airy rooms, at a storage temperature of 10 [°C] to 30 [°C]. The guaranteed shelf life from the date of manufacture is 12 months for Strata Bond S A component and Strata Bond S B component only in unopened original packaging.

Tests and Approvals

The system meets the German mining approval standards according to the Arnsberg District Government Department 6 Mining and Energy/ NRW-Requirements:

1. “Examination of an elution behaviour of the polyurethane-based injection resin" ecotoxicological effects on groundwater. MFPA Leipzig GmbH, August 2018.
2. Reaction temperature and flash point. DMT GmbH, June 2018
3. Material consistency and self-ignition determination. DMT GmbH, July 2018.
4. Testing of hygiene in mining and evaluation of two-component systems for rock consolidation in accordance with § 10 of the Mining Ordinance for Hard Coal Mines (BVOSt) and § 18 of the Mining Ordinance for Ore-, Salt-Mining and for Rock- and Earth Operation (BVOESSE) in conjunction with DIN 22100. Hygiene Institute, Gelsenkirchen, August 2018
5. “Investigation of the elution behaviour of a 2-component resin” KTW guideline drinking water tests. MFPA Leipzig GmbH, Germany, October 2018.

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Environment and Safety Instructions

Empty containers can be disposed of within Germany via local disposal companies, subject to their terms and conditions. The materials will not be taken back to the production site or to the distribution depots. Please refer to the safety data sheets for information on the disposal of the remaining materials, as well as of the empty containers.
During application of our products, the applicator is obliged to comply with the applicable protective regulations and with the safety data sheets of DSI Schaum Chemie. According to Annex II of EU Regulation 1907/2006, the safety data sheets must be available to all persons responsible for occupational safety, health protection and handling of the materials. Processing and cleaning of the equipment may only be carried out in protective clothing with safety gloves and safety goggles. According to current knowledge, the use of a suitable skin protection cream is recommended. Skin contamination must be cleaned with soap and water. If splashes get into the eye, it must be immediately rinsed with water and a doctor must be consulted without delay. The material must not be allowed to enter the sewage system or the ground in unmixed condition.

Liability Disclaimer

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